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October 24, 2017 1530 EDT

## **HURRICANES IRMA AND MARIA MANAGEMENT REPORT**

*Information contained in this report reflects HQ and regional reporting from the most recently completed operational period as well as other reports provided by HQ, regional and interagency sources.*

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### **National Incident Management Objectives**

Objective 1: Ensure that health and safety of the EPA responders is considered at all times.

Objective 2: Establish an incident management structure and processes employing the Incident Command System to enable effective overall management of the event with deployment of resources (staff and equipment) in a rapid, aggressive and well-coordinated manner.

Objective 3: Ensure prompt Review and Processing of Fuel Waiver requests.

Objective 4: Prepare for and provide Rapid Assessment of Industrial facilities as requested by the State or under EPA's statutory program responsibilities for CERCLA Superfund, RMP and FRP facilities. Working with our state partners, contact industrial sources within the impacted area to determine their operational status and determine what support can be provided with the monitoring of the start-up of industrial sources.

Objective 5: Prepare for and provide Rapid Assessment & Technical Assistance Drinking Water & Wastewater facilities as requested by the State or local government. EPA will support our state partners in contacting drinking water and wastewater systems.

Objective 6: Prepare a Sustained Response Plan that outlines the resource and equipment needs for a long duration response.

Objective 7: Activate the Agency's Crisis Communication Plan to ensure effective and efficient coordination of all incident communications.

Objective 8: Encourage a collaborative federalism approach, where national, state and local governments interact cooperatively and collectively to solve common problems.

Objective 9: Begin Agency internal and external coordination under the National Disaster Recovery Framework regarding Recovery Support Functions in which EPA is likely to be involved.

## Executive Summary

*The schedule for management reports is every Tuesday and Friday.*

### **Region 2**

- EPA is coordinating with the Federal Emergency Management Agency (FEMA), the United States Army Corps of Engineers (USACE), the United States Coast Guard (USCG), and the commonwealth of Puerto Rico (PR) in regards to field operations, assessment of fixed facilities, drinking water infrastructure, and data transfer. EPA is expanding their drinking water (DW) and wastewater (WW) assessment missions to partner with teams from the PR Department of State (PR DOS) and non-governmental organizations.
- Power remains out for about 85% of the residents of PR and the United States Virgin Islands (USVI). USVI anticipates restoration of power to 90% of clients by **the end of November** 2017. PR Governor Rossello has **set a similar goal for December**, but it is not certain this schedule can be met.
- EPA teams assessed the Dorado Groundwater Contamination NPL site in Caguas, where reports indicated residents might be extracting water from the wells on the sites.
  - **Site Security:** The Puerto Rico Aqueducts Sewer Authority (PRASA) has stationed private security personnel at wells 2, 4, 5, and 6 to mitigate access by the local community.
  - **Sample Results:** EPA has completed sampling of the well locations. The preliminary results of this sampling effort are expected on October 24<sup>th</sup>.
- EPA contractors have developed plans to mobilize barges with the necessary equipment to support the debris mission assignments (MAs), using FEMA transports for PR and USVI. Transport of equipment to PR was delayed and the barge held in Charleston, South Carolina on October 23<sup>rd</sup>. EPA expects the barge will resume voyage on October 24<sup>th</sup>. Delivery to USVI has been completed.
- **As of October 24<sup>th</sup>**, 26.35% of the PRASA-served population is without access to DW service; comparable data for USVI is not available. PR and USVI have island-wide boil water orders.
- **As of October 24<sup>th</sup>**, 19.6% of the sewage treatment plants in PR remain inoperable due to damage to the trunk lines that bring the sewage to the plants, or damage to or lack of electric power at pump stations. In USVI, damage to sewage systems was less severe, but plants do not have primary power, and lack sufficient generators or generator fuel.
- Uniform curfew hours of 8 p.m. to 5 a.m. are in place across all three Virgin Islands.

### **Region 4**

- **As of October 24<sup>th</sup>**, Landfill Technical Specialists assessed 146 Disaster Debris Management Sites (DDMS) in the Florida Keys.
- **As of October 24<sup>th</sup>**, the EPA Container Recovery Group has recovered 4,362 items, including drums, oil containers, and propane tanks. These items are being stored at the container staging area at the Florida Keys Marathon International Airport for categorization and repackaging prior to recycling or disposal.
- **As of October 24<sup>th</sup>**, EPA and USCG field teams recovered 1,289 vessels of the 2,491 identified vessels—1,202 vessels remain.

### **Regional Mission Assignments and Funding**

<b>EPA Region</b>	<b>Mission Assignment Number</b>	<b>Funding Amount</b>	<b>Description of Assignment</b>
Region 2	4339DR-PR-EPA-04	\$6,000,000	To deploy personnel to coordinate and execute all necessary assessments, evaluations, sampling and analysis services/support and other necessary actions associated with ensuring the safety and quality of DW and WW systems, in support of PRASA, Puerto Rico Department of Health (PRDH).
	4339DR-PR-EPA-03*	\$10,000,000	Removal, cleanup and disposal of oil and hazmat; collect and dispose of

EPA Region	Mission Assignment Number	Funding Amount	Description of Assignment
			HHW; monitor immediate threats to public H&S and the environment in PR.
	VI-17090102-EPA-01	(\$10,000)	Expired
	4335DR-VI-EPA-01	(\$100,000)	Expired
	4335DR-VI-EPA-02	\$1,008,000	To perform assessment of oil and hazardous materials releases, contaminated debris and other environmental events in USVI.
	4335DR-VI-EPA-04	\$10,000,000	Conduct oil and hazardous materials field operations, including cleanup and disposal of hazardous materials and oil, and response to orphaned containers in order to mitigate actual and potential threats to public health and safety.
	4335DR-VI-EPA-06	\$2,000,000	EPA provides support preparing for site-specific platforms for situational awareness; environmental data management; operational deployment plans; documentation of assessment activities and results; resource and financial tracking, accountability and cost documentation.
	PR-17090102-EPA-01	(\$20,000)	Expired
	3384EM-PR-EPA-01	(\$75,000)	Expired
	4336DR-PR-EPA-01	(\$125,000)	Expired
	4336DR-PR-EPA-02	\$1,008,000	To perform assessment and reconnaissance of oil and hazardous materials release, contaminated debris and storm impacted infrastructure which may pose a threat to federal responders, as well as, environmental harm in PR.
	4339DR-PR-EPA-01	\$303,000	EPA to FEMA NRCC or PR JFO/EOC
	4340DR-VI-EPA-01	\$130,000	EPA to FEMA NRCC or USVI JFO/EOC
	4340DR-VI-EPA-04	\$2,100,000	EPA to RRCC, JFO, EPA REOC, State EOC and other coordination venues to support FEMA response operations in the USVI.
Region 4	4337DR-FL-EPA-05	(\$90,000)	Expired
	4337DR-FL-EPA-03	(\$525,000)	Expired
	4337DR-FL-EPA-04	(\$9,000,000)	Expired
	4337DR-FL-EPA-07	(\$675,000)	Expired
	4337DR-FL-EPA-08	\$10,000,000	Provide oil and hazardous material field response in support of FEMA response operations providing specialized expertise, conducting damage assessment of oil/hazmat waste impact evaluating hazards; and/or response, removal, or disposal of actual and potential oil discharges, and releases of hazardous substances, pollutants and contaminants and remove pollutants from vessels in or upon navigable waters and adjoining shorelines through November 30 <sup>th</sup> with a state cost share of 10%.
	4337DR-FL-EPA-09	\$675,000	Provide funding for EPA Landfill Specialty Teams through November 30 <sup>th</sup> with a state cost share of 10%.
<b>Total Active MAs</b>		<b>\$43,224,000</b>	

\*A signed MA task order documenting the additional task requested by the PR Solid Waste Authority was received.

### **Total Number of Regional Personnel Involved in Response (as reported on October 24<sup>th</sup>)**

Type	R2 Personnel	R4 Personnel	Total Regional Personnel
EPA*	185	25	210
Contractors	112	44	156
Totals	297	69	366

*\*These numbers include CEPD personnel.*

### **Force Laydown for USVI\* and PR (as reported by R2 on October 24<sup>th</sup>)**

- Region 2 has entered resource orders into the WebEOC Personnel Resource Log.

Type	Personnel USVI	Personnel PR	Total Deployment
EPA*	25	84	109
Contractors	88	41	129
Totals	113	125	238

*\*These numbers include CEPD personnel.*

### **Region 2 Significant Activities**

- On October 23<sup>rd</sup>, EPA conducted non-PRASA well assessments in San Lorenzo, PR. EPA provided water and meals ready to eat (MREs) to a family who was in charge of one of the non-PRASA wells. EPA also inspected the non-PRASA drinking water system in Mongote, PR.
- EPA is working with the Department of Defense (DOD) to develop a sampling and analysis plan for DOD trucks used for potable water distribution. PR DOH requested that all trucks be sampled regularly for biological contamination and residual chlorine.
- Numerous municipalities report disease outbreaks (diarrhea, conjunctivitis, vector-borne diseases etc.). As of October 24<sup>th</sup>, PR Department of Health (PRDH) confirmed 74 potential cases of leptospirosis and one death due to the disease.
- The contract for transport and disposal of the medical waste on STX and STT was awarded on October 20<sup>th</sup>. Operations should begin on October 24<sup>th</sup>, pending the arrival of four special shipping containers.
- U.S. Customs is requiring EPA's EERS contractor to pay a tax on supplies that have arrived in STT/STJ and STX prior to release, despite the fact that there is a U.S. Customs exemption for supplies for entities supporting hurricane relief efforts. FEMA determined that any tax paid by EPA or its contractors would be reimbursed. The ERRS contractor is working to pay the tax and account for all of their equipment.
- All EPA personnel on STT observed the FEMA mandatory safety stand down day and continued to transition with the newly deployed personnel.
- The Region 2 Regional Emergency Operation Center (REOC) and the Puerto Rico Incident Command are considering expanding the ICS structure.

### **Superfund and Oil Sites**

- There are 34 Superfund and oil sites (30 in PR and 4 in USVI). EPA finished preliminary assessments at Superfund and Oil Response Sites in PR and USVI with the exception of inaccessible sites on Vieques and Culebra. EPA is following up with the RPMs and OSCs at assessed sites concerning the issues listed in the table below.

Hurricane Maria Site Summary (Remedial, Removal, Oil) as of October 24 <sup>th</sup>			
Facility Name	Location	Inspection Date	Site Description
Atlantic Fleet Weapons Training (Vieques)	PR		Additional assessment scheduled.
Culebra	PR		Federal facility lead for assessment.
Dorado Groundwater Contamination	PR	10/12/17	Fence repaired October 14 <sup>th</sup> . Signs needed. Water sampling ongoing.
Fibers Public Supply Wells	PR	10/5/17	Groundwater treatment system fence in good shape. Request comprehensive well sampling when system operational.
GE Wiring Devices	PR	10/6/17	Fence damaged in many spots.
Guaynilla Bay Oil Spill	PR	10/6/17	Absorbent sock needs replacement. Sheen noticed in culvert.
Hormigas Groundwater Plume	PR	10/6/17	Fence repaired. Signs needed. Wells secure.
Pesticide Warehouse 1	PR	10/4/17	General storm damage. No power. Fence needs repair.
Pesticide Warehouse 3	PR	10/4/17	General storm damage. No power. Fence needs repair.
PR Olefins	PR	10/11/17	Some storm damage. Follow up visit with potentially responsible parties.
San German Groundwater	PR	10/12/17	Fence repaired. Signs needed. Wells secure.
Scorpio Recycling Inc.	PR	10/5/17	Part of roof missing. Many windows missing/broken. Many unlabeled drums/containers. Hundreds of tires.
Upjohn Facility	PR	10/5/17	Aeration tower destroyed.
Vega Alta Public Supply Wells	PR	10/5/17	Parts of tin roof torn off. Structural damage.
Cruz Bay Oil Tank	STJ	10/9/17	Partially collapsed tank with viscous oil material in bottom. Site is stable. Pends completion of tank removal.
Tutu Well Field	STT	10/3/17	Fence down.

#### Regulated Facilities in PR and USVI

- The Regulated Facility Team (RFT) continues to provide effective compliance assistance to Risk Management Plan (RMP), Facility Response Plans (FRP), and Spill Prevention, Control and Countermeasures (SPCC) regulated facilities.
- In USVI, Virgin Island Asphalt Products facility sustained significant damage, including damage to some oil tanks with discharges of product to secondary containment. The facility owner is addressing the issues with EPA oversight.

Facility Type	Total Field Assessments Completed to Date (as of October 24 <sup>th</sup> )	Total # of Facilities to be Assessed
Puerto Rico		
RMP	81	56

FRP	29	23
SPCC (non-FRP)	131	0*
Total	241	79
<b>USVI</b>		
RMP	1	1
FRP	7	6
SPCC (non-FRP)	59	0*
Total	67	7

*\*Total number of SPCC facilities assessed is identified by impacted geographic areas.*

### **Drinking Water/Wastewater (DW/WW) Assessments in PR**

- EPA staff are participating in ongoing PRASA facility assessments.
  - Out of PRASA's 51 facilities, 10 wastewater treatment plants (WWTPs) are non-operational, 3 of which are upstream of a drinking water intake.
    - Utuado (2.0 MGD) – Main trunk sewer collapsed, no sewage reaching the plant. PRASA Utuado is a priority plant for repair because the current overflow dumps directly into a river that is used as a DW intake. EPA is following up with PRASA to determine if they contracted this work with USACE.
    - Corozal (1.25 MGD) – Main trunk sewer collapsed, no sewage reaching the plant. PRASA already has a contractor on site. It may take two weeks for repairs.
    - Parcelas Borinquen (0.3 MGD) – Alternate power unit out of service.
  - 9 WWTPs are working on primary power.
  - 25 of the 115 drinking water treatment plants (WTPs) operated by PRASA are out of service.
  - 76 WTPs are working on alternate power or primary power.
  - About 26% of the population is without drinking water services due to the lack of primary power, lack of diesel, operational problems, or clogged intakes.
  - Assessments are complete at around 80% of PRASA's 800 sanitary pump stations. As of October 20<sup>th</sup>, at least 233 sanitary pump stations are overflowing sewage due to lack of power, malfunctioning power generator, or pumping problems. Of these 233 pump stations, 92 are located upstream of a water supply intake.
  - PR's biggest concern is the largest pump station, Torrecillas Pump Station, which suffered major damages due to flooding. PREPA was energizing the area to get the pump station back in service, and PRASA is trying to obtain a generator from FEMA.
- Non-PRASA drinking water facilities serve approximately 4% of the PR populations (PRASA systems service the other 96%). EPA is working with PR Department of Health, DOD, Department of Health and Human Services, and FEMA, in assessing the non-PRASA drinking water systems throughout PR. Such systems provide drinking water from wells and surface water to isolated communities located in rural areas in PR.

Drinking Water Plants Out of Service in PR (as of October 24 <sup>th</sup> )		
Name	Volume Processed (MGD)	Status
Cidra Urbano	7.0	
Culebras Alto	0.33	Alternate power unit out of service.
Canalizo	0.14	Alternate power unit out of service.
Mameyes Arriba	0.43	Alternate power unit out of service.
Mameyes Abajo	0.22	Raw water pump station out of service.
Santa Isabel	1.0	Raw water pump station. Alternate power unit out of service.
Utua Urbano	3.5	Raw water pump station. Alternate power unit out of service.
Frontón	0.25	Alternate power unit out of service.
Jaguas Pesas	0.25	Raw water intake alternate power unit out of service.
Morovis Sur	4.0	Alternate power unit out of service.
Sana Muerto	0.5	Alternate power unit out of service.
Almirante Sur	1.0	Raw water pump station flooded.
Negros	2.5	Alternate power unit out of service.
Guajataca	2.0	Not receiving water.
Betances	2.0	Not receiving water.
Sabana Grande	0.75	Not receiving water, pipes in dam being repaired.
Coamo Urbano	1.05	Collapsed raw water intake.
Matrullas	0.25	Alternate power unit out of service.
Orocovois Urbano	3.3	Raw water pipeline collapsed due to recent rain events.
Aceituna	2.5	High turbidity.
Apeadero	0.25	Collapsed raw water intake.
Lizas	1.0	Alternate power unit out of service.
Rio Prieta	0.4	Problem with water intake pump.
Patillas Urbano	6.0	Alternate power unit out of service.
Rancheras	0.22	Water distribution pump station is out of service.

Wastewater Treatment Plants Out of Service in PR (as of October 24 <sup>th</sup> )		
Name	Volume Processed (MGD)	Status
Utuaado	2.0	Main trunk sewer collapsed, no sewage reaching the plant.
Guayanilla	0.6	Alternate Power Unit out of service.
Ciales	1.5	Collapsed trunk sewer line.
Corozal	1.25	Main trunk sewer collapsed, no sewage reaching the plant. PRASA already has a contractor on site. It may take two weeks for repairs (as of October 20 <sup>th</sup> ).
Dorado	4.05	Facility suffered major equipment damages since it was completely flooded.
Toa Alta	0.8	Plant was flooded, major equipment damages.
Santa Isabel	5.5	Alternate power unit out of service but is being repaired.
Camuy Hatillo	3.0	Equipment out of service.
Yabucoa	1.5	Alternate power unit out of service.
Parcelas Borinquen	0.3	Alternate power unit out of service.

#### Drinking Water/Wastewater (DW/WW) Assessments in USVI

- EPA presented DPNR with a draft decision-making matrix for review to help guide EPA's water sampling assistance to the department. EPA and DPNR discussed this matrix and developed procedures for the entire USVI territory. A list of action items includes key actions to address during the week of October 23<sup>rd</sup>.
- A boil water advisory remains in place across the USVI.
- EPA continues to coordinate drinking water sampling with DPNR. DPNR continues to notify the proprietors of the affected systems to ensure proper disinfection measures are taken.

#### Total Region 2 Drinking Water/Wastewater (DW/WW) Assessments

Drinking Water and Wastewater Assessments (as of October 22 <sup>nd</sup> )		
Assessment Types	Total Assessments on PR	Total Assessments on USVI
On-Site DW Assessments	243	628
On-Site WW Assessments	178	23

#### PR and USVI Air Monitoring Activities



- The PR Environmental Quality Board (EQB) plans to conduct an assessment on the conditions of the ambient air monitoring network. The network went offline prior to Hurricane Maria's landfall. There is no update or information on the status or damages. EQB will staff an assessment team once their employees are available.
- In St. Thomas and St. Croix, on October 17<sup>th</sup>, EPA was requested by FEMA and the Virgin Islands Department of Planning and Natural Resources (DPNR) to assess air quality in schools. A final report of assessment activities of air monitoring in schools was sent to Virgin Islands Territorial Emergency Management Agency (VITEMA), VI Department of Education, and members of the St. Croix Schools Task Force. Although recommendations were made to test for potential asbestos containing material and to take standard precautions to protect workers from exposure to mold and dust, no air monitoring was deemed as necessary.
- USACE requested EPA assistance with air monitoring during the USACE's air curtain burning of vegetative debris activities. See the USVI Debris Recovery section below.

### **PR Debris Recovery**

- EPA added a Hazardous Debris Assessment Team to each of the three field branches to coordinate with CEPD and USACE. The Hazardous Debris Assessment Teams established new HW staging/collection areas at the Mausoleum Debris Pile in Toa Baja, as well as Interception 265 Toa Baja, PR 165 (near National Lumber) and Candelaria Toa Baja.
- EPA met with the municipality representatives in Anasco, Aguada, and San Sebastian, within PREMA Zone 4 to perform debris management outreach. The team documented site conditions at debris staging areas in Anasco and Aguada.
- Teams evaluated potential EPA staging areas in two municipalities located in PREMA Zone 6, six municipalities in PREMA Zone 9, two municipalities in PREMA Zone 10, and two municipalities in PREMA Zone 11. All of these potential staging areas are currently being used for vegetative waste and C&D by the municipalities
- The USACE closed open dumping at the Campanilla site, but expects that some of the public may continue dumping at this location. EPA began periodic surveillance and collection at the site on HHW on October 22<sup>nd</sup>.

### **USVI Debris Recovery**

- EPA received final selection for HHW and white goods collection sites in STX and is waiting for DPNR to identify a staging location on STT.
- USVI is allowing the burning of vegetative debris. USACE intends to segregate construction and demolition (C&D) debris prior to burn operations and Virgin Islands Waste Management Authority (VIWMA) will handle the C&D debris.

### **Orphan Container, Pollution Response, and Vessels in PR and USVI**

- USCG tentatively identified 266 sunken vessels in PR as initial targets for assessment. Data collection and reporting procedures are under development.
- In USVI, EPA contractors continued inputting the vessel assessment info into Response Manager database. 249 targeted vessels have been identified to date.

### **EPA Headquarters Significant Activities**

- The HQ EOC is activated to Level 1 in support of EPA Regions 2 and 4 responses to Hurricanes Irma and Maria. For the Hurricanes Irma and Maria responses, the HQ EOC is coordinating on several levels with EPA Regions 2 and 4, and other Federal agencies.
- The HQ EOC is staffed with 9 EPA personnel and 3 contractors. The HQ EOC also deployed personnel to the FEMA NRCC's ESF-10 desk.
- EPA Senior Management on the Policy Coordination Committee (PCC) developed and issued senior management objectives that form the basis of field strategy and tactics in response to Maria and Irma.

## **Other EPA Activities**

### **OECA**

- CID has 2 agents assigned to PR and available for security details. Additional agents will be mobilized to PR as needed.
- On October 20<sup>th</sup>, EPA approved a request from Pace Analytical Inc. for a 30-day extension of the 90-day limit on the accumulation of hazardous waste on-site.
- On October 20<sup>th</sup>, EPA extended a No Action Assurance (NAA) to Merck, Sharp and Dohme Corp. to enable the continued use of a fifth emergency generator located at its Las Piedras PR facility. The NAA expires on October 31<sup>st</sup>.

### **Communications**

- Region 2 will publish a press release on October 24<sup>th</sup> highlighting progress on NPL/oil/removal sites and necessary follow-up.
- A story map with information about Region 2's response efforts is now under development.
- Region 2 public affairs and CIC staff are addressing media and community outreach actions to warn the public about improperly accessing Superfund sites.
  - The EPA CIC for the Dorado Groundwater Contamination site spoke with local residents, and they were aware that wells are associated with contamination at a Superfund Site but indicated a need for water.
- A video, entitled "Community Water Assessment Mission," is now posted at <https://www.dvidshub.net/video/557519/community-water-assessment-mission>.
- Region 2, Region 4, and HQ activities related to Irma and Maria response efforts are available at: <http://www.epa.gov/hurricane-irma> and [www.epa.gov/hurricane-maria](http://www.epa.gov/hurricane-maria), respectively.